

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-6, 8, 9, 12-17, 21-26, and 28-35 are pending in the present application, Claims 1 and 8 having been amended, Claims 7, 10, 11, 18, 19, 20, and 27 having been canceled without prejudice or disclaimer, and Claims 28-35 having been added. Support for the amendments to Claims 1 and 8 are found in original Claims 7 and 10, respectively. Support for new Claims 28-31 is found, for example, in the specification at page 19, lines 18-20. Support for new Claims 32-35 is found, for example, in Figs. 1, 14, and 16, and in their corresponding descriptions of Figs. 1, 14, and 16 in the specification. Thus, no new matter is added.

In the outstanding Office Action, Claims 21-25 were allowed; Claim 10 was objected to for depending from a rejected base claim, but was otherwise indicated as including allowable subject matter; Claims 1-3, 5, 7-9, 11, 12, 14-18, and 27 were rejected under 35 U.S.C. §102(e) as anticipated by Leung et al. (U.S. Patent No. 6,653,718, hereinafter Leung); and Claims 4, 6, 13, 19, and 26 were rejected under 35 U.S.C. §103(a) as unpatentable over Leung in view of Gu et al. (U.S. Patent No. 6,551,901, hereinafter Gu).

Applicants thank the Examiner for the indication that Claims 21-25 are allowed and that Claim 10 includes allowable subject matter. Claim 8 is amended to include the allowable subject matter of Claim 10. Thus, Applicants respectfully submit that Claim 8 (and dependent Claims 9, 12-15, 29, and 33) are in condition for allowance. New Claim 31 depends on Claim 22, which has been allowed. Claim 35 depends on Claim 21, which has been allowed. Therefore, new Claims 31 and 35 should also be allowed.

With respect to the rejection of Claim 7, the subject matter of which is incorporated into amended Claim 1, under 35 U.S.C. §102(e) as anticipated by Leung, Applicants

respectfully traverse this ground of rejection. Amended Claim 1 recites *inter alia*, “wherein an average diameter of the insulating particles falls within a range of 100 nm to 500 nm or a range of 100 nm to half a width of opening of the trench.” Leung does not describe or suggest at least this element of amended Claim 1.

The outstanding Office Action states on page 3, lines 18-20, “Leung discloses the device where the average diameter of the insulating particle falls within a range of 100 nm to 500 nm as shown in column 4 line 29.” The outstanding Office Action also states on page 4, lines 6-11, “Leung discloses a semiconductor substrate 45 with a trench 42 and particulate insulating layer 46/47 filling at least a lower portion of the trench and comprising insulating particles and an insulating binder in column 4 line 60, that bonds the insulating particles together, the insulating particles and the insulating binder forming a network structure where the average diameter of the insulating material falls within a range of 100 nm to 500 nm.”

On the contrary, Leung does not disclose an average diameter of insulating particles in column 4, line 29 or line 60. Leung merely discloses nanoparticles having a characteristic dimension between about 2 nm and about 50 nm in column 4, lines 40-41. Thus, Leung does not disclose or suggest the claimed “wherein an average diameter of the insulating particles falls within a range of 100 nm to 500 nm or a range of 100 nm to half a width of opening of the trench.”

In view of the above-noted distinction, Applicants respectfully submit that amended Claim 1 (and Claims 2-6) patentably distinguish over Leung. Applicants respectfully submit that Claim 16 is similar to amended Claim 1. Thus, Applicants respectfully submit that Claim 16 (and Claims 17, 26, 28, 30, 32, and 34) patentably distinguish over Leung, for at least the reasons stated for amended Claim 1.

Furthermore, Applicants respectfully submit that Gu does not cure the above-noted deficiencies in Leung.

Application No. 10/694,903
Reply to Office Action of September 30, 2005

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Eckhard H. Kuesters
Attorney of Record
Registration No. 28,870

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)

Surinder Sachar
Registration No. 34,423

I:\ATTYJW\244619US\244619US_AM DUE 12-30-05.DOC